

ALABAMA

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Coastal Section and the Mobile Bay National Estuary Program

Spring 2005

Post-Ivan Habitat Restoration at Perdido Pass

Carl Ferraro, State Land Division Coastal Section

Prior to Hurricane Ivan, which hit the Alabama coast on September 15 and 16, 2004, the Florida Point Unit of Gulf State Park had one of the most extensive Gulf-fronting sand dune fields in Orange Beach. Based on data collected by Baldwin County in 2001, this unit of Gulf State Park, which is located on the east end of Perdido Key, contained dune ridges as high as 15 feet above mean sea level (MSL). These dunes were well vegetated with sea oats, other native beach and dune plants, and provided habitat for the Perdido Key beach mouse, wintering piping plovers, nesting sea turtles and many other sensitive beach and dune species.

However, storm surge from Hurricane Ivan had a severe impact on this site. Large quantities of sand from the dune fields were carried offshore, pushed into Perdido Pass or over-washed to the north side of Ala. Highway 182. When compared to Pre-Ivan conditions, 5-10 feet of beach and dune elevation was lost and thousands of cubic yards of sand was displaced. Additionally, the dunes anchoring the eastern end of the eastern jetty for the Perdido Pass Navigation Project were breached and the eastern jetty suffered severe damage. Storm surge from Hurricane Ivan damaged the weir section of the jetty, which allows sand to bypass the jetty into a deposition basin, and even scattered some of the large rocks that form the jetty.

As a result of the large quantities



Restoration of Perdido Pass after Hurricane Ivan, Orange Beach, Alabama

of sand transported into the Perdido Pass navigation channel and the damage done to the jetties by Hurricane Ivan, the U.S. Army Corps of Engineers (Corps) is conducting emergency dredging operations to maintain safe navigation through the Pass. This includes dredging the navigation channel and the deposition basin as well as dredging an access channel along the eastern jetty so that a work barge may conduct repairs. All of these activities will result in a larger than usual amount of beach quality sand being dredged.

Given the fact that a large quantity of beach quality material would be dredged from the navigation project and that the dune habitat on the Florida Point Unit had been severely damaged, the U.S. Fish and Wildlife Service Daphne

Field Office (USFWS) approached the Corps and the Alabama Department of Conservation and Natural Resources (ADCNR) and requested the agencies consider using the beach quality sand to rebuild the dune habitat on the Florida Point Unit. This request resulted in a number of meetings between staff members from the USFWS, the Corps, the ADCNR-State Lands Division Coastal Section, the ADCNR State Parks Division Gulf State Park, the Alabama Department of Environmental Management Coastal Facilities Section and the City of Orange Beach. During these meetings, it was decided that the use of the dredged materials from Perdido Pass to rebuild the habitat on the Florida Point Unit would be of great benefit to all parties involved and to the



Coastal Conservation Corner

By Phillip Hinesley, Section Chief
State Lands Division, Coastal Section

2004 was an interesting year in terms of weather events. It was one of the most active years for tropical storms in recent history. While the State recovers from the damage of Hurricane Ivan, coastal areas like Dauphin Island, Fort Morgan, Gulf Shores and Orange Beach and Mobile, as well as smaller surrounding communities, are also still recovering. The hardest hit areas were the coastal beaches and dunes. The beach and dune system serve as the first line of defense against large storms, such as hurricanes, by acting as a buffer to reduce the impact of the storm further inland. Soon the Cities of Gulf Shores and Orange Beach and the State of Alabama will begin to restore the damaged beaches and sand dunes in south Baldwin County. Approximately 5 million cubic yards of sand will be placed over 11 miles of Gulf of Mexico shoreline.

A stable shoreline is vital to the economics of south Baldwin County. We recognize that the tourist economy in south Baldwin County is a great economic engine that provides for 50,000 jobs and produces billions in dollars of revenue annually. This economy is based on a healthy beach and dune system and clean water. While healthy beaches mean a healthy economy it also is extremely important to fish and wildlife. Beaches and dunes provide essential habitat for shorebirds, beach mice, sea turtles and other wildlife. Coastal habitat is just as important as the economic side of the coin and is vital to achieving sustainable, healthy communities.

The big challenge for coastal Alabama and the nation is how we balance healthy economics and conservation of natural resources. Earlier this year the US Ocean Commission

released its final report to Congress and the President. This report made numerous recommendations for national ocean policies. In response to the US Ocean Commission Report, President Bush released a US Ocean Plan on December 17, 2004. While the plan did not address all the recommendations in

“While the plan did not address all the recommendations in the US Ocean Commission Report it is a good start in addressing ocean and coastal needs.”

*-Phillip Hinesley
Chief, Coastal Section*

the US Ocean Commission Report it is a good start in addressing ocean and coastal needs. The plan calls for specific action items to be accomplished over the next 18 months.

These action items include an improved coordination and governance system at the federal level, and building a global earth observation network including a substantial ocean component known as the Global Ocean Observing System. Another item is to support a regional partnership among the five Gulf States who will address critical issues with an emphasis on public health, water quality and shellfish beds. The Plan also calls for the National Oceanic and Atmospheric Administration (NOAA) and the Environmental Protection Agency (EPA) to work together in addressing priority nonpoint source pollution and land use issues in watersheds. Later this year, NOAA and EPA will hold over 30 workshops in various states to improve integration

and coordination of the Coastal Zone Management Act, Clean Water Act and other federal programs in order to assist states in managing growth and protection of watersheds. Finally, the plan calls for support of the Reauthorization of the Coastal Zone Management Act. NOAA has committed to work with Congress, states and local governments on the reauthorization of this important federal/state cooperative program.

We are excited about the President's US Ocean Plan and see it as a solid beginning to the challenge of balancing economic growth and preservation of natural resources.

For a copy of the President's Plan go to www.ocean.ceq.gov.

Alabama Current Connection is produced as a joint publication of the Alabama Department of Conservation & Natural Resources, State Lands Division (SLD), Coastal Section and the Mobile Bay National Estuary Program (NEP)

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The editorial staff reserves the right to edit submissions for content and grammar.

Congratulations to Coastal Award Winners!

Alabama Coastal Area Management Program Celebrates 25th Anniversary with Appreciation Awards

The year 2004 marked the 25th anniversary of the Alabama Coastal Area Management Program (ACAMP). The occasion was commemorated with the presentation of awards to two individuals who have shown support for the program from the beginning. Dr. George Crozier, Director of the Dauphin Island Sea Lab, and State Representative Steve McMillian received awards of appreciation of their support to the program and to conservation efforts in the Alabama coastal area at the Wehle Nature Center during the 1st Annual Coastal BirdFest on October 16, 2004.

“It was an honor to present these awards to individuals who hold such a high conservation ethic,” said Phillip Hinesley, Coastal Section Chief of the Alabama State Lands Division. “The Alabama Coastal Area Management Program strives to strike a balance with conserving natural resources and economic growth. Their support over the years has been a great asset to the program.” *-A. King*



Dr. George Crozier (left), Director of Dauphin Island Sea Lab, and State Representative Steve McMillian (not pictured) received awards from Phillip Hinesley, Coastal Section Chief, for their 25 years of involvement with the Alabama Coastal Area Management Program.

Perdido Pass *continued from page 1*



Beach at Florida Point Unit of Gulf State Park after Hurricane Ivan. Sand dredged from Perdido Pass will be restored to the beach to rebuild dunes providing renewed habitat and suitable sea turtle nesting areas.

wildlife that uses these habitats. The parties then conducted two site visits to develop a plan for reconstruction of the dune habitat. This plan eventually included rebuilding dunes and dune

ridges with elevations of 10-15 feet above MSL to mimic pre-Ivan conditions. These dune features will be constructed as far east as the availability of dredged material will allow and will have a natural slope to the wet sandy beach to facilitate sea turtle nesting.

Approval from the ADCNR to conduct this project on the State-owned lands of the Gulf State

Park was issued by Commissioner Barnett Lawley to the Corps in mid-January. With this approval the Corps began dredging operations in early February 2005, with habitat

restoration proceeding shortly thereafter. Additionally, the parties involved have continued to coordinate to determine if funding is available to place sand fencing and plant native vegetation on the reconstructed dunes. Based on the time required to dredge the navigation project, the dune habitat at the Florida Point Unit should be rebuilt by early spring 2005.

The coordination and cooperation between state, local and federal agencies, which led to this habitat restoration project, is an excellent example of how agencies can interact to facilitate solutions to coastal management problems. By working together, the agencies involved have turned a hurricane recovery and sediment disposal problem into a habitat restoration solution that will greatly benefit the people and wildlife of Coastal Alabama.

Current Events

March 15

2nd Annual Baldwin County Water Festival for 4th grade students, for more information contact Mike Shelton 251-928-9792

April 1

"Cocktails with the Critters" featuring art by Stig Marcussen and special guest Dr. E.O. Wilson, for more information contact Lisa Young 251-861-7509

April 2

Discovery Day at Dauphin Island Sea Lab, 10 AM to 2 PM, for more information contact Lisa Young 251-861-7509

April 8-10

Dauphin Island Bird Sanctuary America's Birdiest City/County Competition 2005, for more information contact John Porter 251-861-2120

April 17

15th Annual Bay Area Earth Day, Fairhope Pier Park, 12 Noon-5 PM, for more information contact Marcy Gerhart 251-929-3589

April 27

4th Annual Coastal Kids Quiz, for 5th grade students and teachers, for more information call Alabama Coastal Foundation 251-990-6002

May 21

9th Annual Weeks Bay Area River Cleanup, for more information call Mike Shelton 251-928-9792

May 28

11th Annual Mobile County/City Day at the Mobile Government Plaza 11:30am-4:30pm

For more information about these events please contact Lee Yokel at 251-431-6409 or Amy King at 251-929-0900.

Wehle Programs Focus on Coastal Issues



Gatra L. Wehle Nature Center located in Historic Blakeley State Park.

The Alabama State Lands Division, Coastal Section sponsors weekend educational programs focusing on environmental issues facing the coastal area

at the Gatra L. Wehle Nature Center. Established in 2003, the Gatra L. Wehle Nature Center serves to promote conservation and responsible land stewardship through education.

Programs are presented by Coastal Section staff from the Alabama Coastal Area Management Program and the Weeks Bay National Estuarine Research Reserve. The Wehle Nature Center is open from 10am-4pm on select Saturdays. For more information on weekend programs please contact Amy King at 251-929-0900 or visit www.outdooralabama.com. -A. King



Carl Pinyerd, NEP Community Advisory Committee Member

Get to Know... Community Advisory Committee Member, Carl Pinyerd

Carl Pinyerd has been volunteering for the Mobile Bay National Estuary Program (NEP) since its inception. Many people in the coastal area may have met this hardworking man and not realized it. Carl, his colleagues at Thompson Engineering and, often, his son Gus have been putting their brains and brawns to work for nearly 10 years.

Carl's volunteer roots started many years ago when he worked in Swaziland, Africa for the Peace Corps. Carl is also a staunch advocate and supporter of other community oriented organizations such as Boy Scouts of America and the Soil and Water Conservation Society, where he served as President in 2003. As an NEP volunteer, Carl has participated on various NEP committees helping to develop the Comprehensive Conservation and Management Plan as well as getting out and getting dirty in community activities.

Carl works for Thompson Engineering as a soil scientist. He is one of the area's leading experts on erosion and sedimentation best management practices (BMPs). -L. Yokel



From the Director's Desk

By David Yeager, Director
Mobile Bay National Estuary Program

Four months have passed since Hurricane Ivan struck the Alabama coast. Appropriately, recovery remains a priority among many coastal residents and has left little time or inclination for other pursuits. Recovery efforts have been impressive. However, I am also impressed by the progress our coastal communities and organizations have made on local environmental initiatives during this period. Here are a few representative examples.

- A second survey of non-native species was conducted along the Mississippi Coast, building on last year's successful effort in Mobile Bay. Over 150 scientists and technicians participated.

- The first Coastal Alabama Birdfest was a success despite local storm damage; raising over \$43,000 for purchase of critical bird habitat.

- Among other environmental initiatives, the Baldwin County Commission initiated a new land-use/land-cover mapping project to provide tools that will help quantify how land use decisions affect our environment.

- Several environmental initiatives have been taken by Mobile County including the adoption of subdivision regulations. Provisions include prohibition of dirt road subdivisions and additional requirements for storm water retention facilities among others.

- Smart Growth initiatives continue to take hold with several local grass roots efforts and the Mobile City Council's adoption of a suite of Smart Growth Implementation Initiatives developed by the Mayor Dow's Task Force and the Planning Department.

- Mobile Bay National Estuary Program (MBNEP) and the Weeks Bay Reserve hosted a day-long Internet

broadcast, Estuaries Live!, for K-12 students nationwide, demonstrating not only the unique characteristics of our estuarine environment but also the direct impacts of a major hurricane (the show must go on!).

- A fourth station at Middle Bay Lighthouse was added to our continuous water and weather monitoring network, and damage to our Dauphin Island station is being repaired.

- Contracts are now in place to begin water and sediment monitoring in three of the sub-estuaries around Mobile Bay to allow us to make better judgments on water quality in these areas.

- The Alabama Coastal Foundation completed its beautiful book on the Mobile-Tensaw Delta entitled *In the Realms of Rivers*.

- The first phase (Mobile County) of a major habitat mapping project for Mobile and Baldwin Counties is nearing completion.

- Area scientists completed the first phase of a Mobile-Tensaw Delta Hydrological Impacts Study.

- The Gulf of Mexico Program's Comprehensive Report on the Status and Trends of Seagrass along the Gulf Coast was completed. Local experts made major contributions based on recently acquired data.

- The Baldwin Regional Transit Coalition and Envision Coastal Alabama conducted a Transit Summit to bring national expertise to bear on a topic that has substantial local environmental impact.

- State Lands Division agreed to be the non-federal sponsor for a major habitat restoration project in concert with the Corps of Engineers along the Dauphin Island Parkway south of Bay Front Park. Other partners are the MS-AL Sea Grant Program and the

MBNEP.

- The City of Gulf Shores under the heading of "Envision Gulf Shores" is undertaking a comprehensive and long-range look at strategic planning and coastal issues as they rebuild. Redevelopment, zoning, vertical density and other issues are being examined.

Our coastal organizations and communities deserve high marks for their progress despite a major natural disaster and its attendant personal impacts. Perseverance is the key to progress.

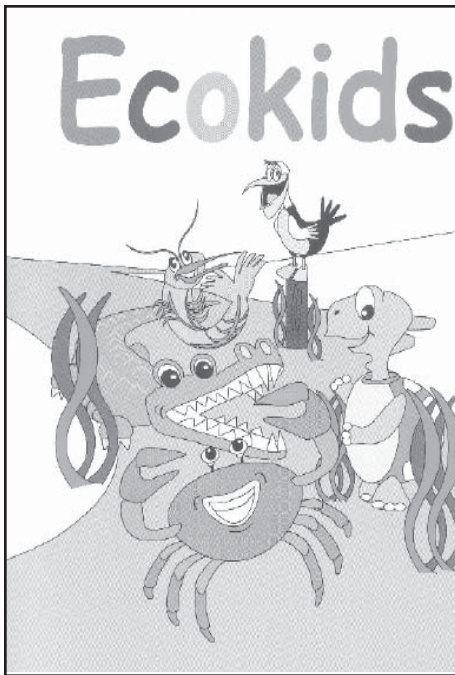
Crab Watch

The Mobile National Estuary Program (NEP) is partnering with the Alabama Marine Resources Division to begin a pilot volunteer program. Crab Watch is an opportunity for recreational crabbers to monitor for invasive species as well as track the Blue Crab (*Callinectes sapidus*) as it cycles through coastal Alabama waters.

The program is slated to begin in the late spring. If you would like to be considered for participation please call the NEP office at 251-431-6409 or email Kara Lankford at klankford@mobilebaynep.com.



EcoKids Activity Book



The EcoKids activity book is now available and copies are going fast. Developed by students at Spring Hill College, the coloring and activity book is targeted toward elementary school students.

As part of a senior project in graphic design, Blair Carroll developed activities and illustrations that teach children about our estuary. Blair enlisted the help of fellow students Daniel Spotswood to craft the story and Yusuke Asakura for character development. The students worked through the guidance of Instructor Janden Richards. Ms. Richards strives to create real world settings in the classroom to provide more valuable and useful learning experiences.

The Mississippi Alabama Sea Grant Consortium partnered with the Mobile Bay National Estuary Program (NEP) to print the book and develop a companion 'color-on' for t-shirts. If you are interested in obtaining a copy of the book, contact the NEP at 251-431-6409 or visit www.masgc.org.

EPA Rates the Nation's Estuaries as "Fair"

The overall environmental assessment of our nation's estuaries and coastal waters continues to be rated as "fair" according to the Second National Coastal Condition Report by the Environmental Protection Agency (EPA). The rating, which is essentially unchanged from the first report issued in 2001, is based on data collected between 1997 and 2000 by coastal states and a number of federal agencies. Five indicators were used in the assessment: water quality, coastal habitat loss, sediment quality, benthic community condition, and fish tissue contaminants. Only the southeast coastal area received a designation as "good." The Gulf and westcoast areas are in the middle as "fair" and the northeast coast and Puerto Rico rated "poor." The Great Lakes were "fair to poor." Mobile Bay's rating fell into the "fair" category.

The report's conclusions are consistent with the calls to action contained in both the Pew Ocean Commission Report and the President's Ocean Commission Report regarding the threats to our nation's coastal waters. The fact that ratings have not appreciably changed since the first report provides a strong admonition that more needs to be done to preserve and protect these valuable coastal resources. Although printed copies are not yet available, the report can be downloaded from <http://www.epa.gov/owow/oceans/nccr2/>. -D. Yeager

Notes from Ivan: Trees and Hurricanes

Fred Nation, Volunteer, State Lands Division-Weeks Bay Reserve

Following Hurricane Ivan, local naturalist and volunteer Fred Nation conducted an informal survey of area trees. These are some of his interesting observations.

- No individual tree or tree species is immune from wind damage.

- Tree location is at least as important as the species. Trees near roads, parking lots, buildings and driveways have restricted or damaged root systems, which makes them prone to fall in high winds.

- When damaged, trees do not heal. New growth will encapsulate injuries, but any structural defects and root damage will remain and accumulate over the life of the tree. Some trees that were damaged during Hurricane Frederic were toppled during Ivan, twenty-five years later. Dead, decayed roots can often be seen on fallen trees.

- Heavy rains and winds in thunderstorms will continue to cause root damaged trees to fall.

- Trees that are very susceptible to wind damage are Pecan, Sweet Bay,

Water Oak, and Laurel Oak.

- Trees that caused the most structural damage during Ivan were large Yellow Pines, Water Oak, Laurel Oak, and Southern Red Oak. Part of the reason is proximity. These trees are large canopy species that are commonly grown as shade trees around buildings.

- Sprouts from fallen or cut trees are not a good bet. The grain at the junction between stump and sprout is usually weak, and the stump will continue to decay below ground. A better option is to fill the space with a well grown container-grown tree.

- Small or medium-sized trees, such as dogwoods, hollies, maples, or fruit trees, will provide shade around dwellings without causing catastrophic damage when they fall. There are some nice small and medium-sized native species available at area plant sales.

- Trees that suffered relatively little damage during Ivan are Live Oak, Southern Magnolia, Bald Cypress and Hickories.



Middle Bay Lighthouse Monitoring Site

The Mobile Bay National Estuary Program (NEP) in partnership with Dauphin Island Sea Lab (DISL) is adding to their Environmental Monitoring stations around Mobile Bay. A fourth station will be at Middle Bay Lighthouse, courtesy of the Alabama Lighthouse Association. Existing sites are located at Maher State Park, Weeks Bay Reserve, and Dauphin Island.

Each site monitors water quality and meteorological conditions. The data are transmitted to a server at the DISL where the information is sent in near real time to the Internet. The Middle Bay site will offer a unique water quality regime. Sensors will be programmed to take measurements at different depths in the water allowing interested parties to see a profile of information about the water column.

The Middle Bay station is a collaboration of several entities. The weather component of the station is being funded by Dr. Styske Kimbal, University of South Alabama (USA) Earth Sciences Department, through a National Science Foundation Career Grant. The water quality equipment is being supported by the USA Oyster Restoration Project. The NEP/DISL partnership will install and maintain the equipment as well as make the data available to the public.

The new site should be running by late spring. All four sites have experienced technical difficulties as a result of Hurricane Ivan and are in the process of being fixed. To view data reported from the three current monitoring locations, please visit <http://cast-net.disl.org/monitoringdata/nep/index.htm>. -L. Yokel

Sub-Estuary Monitoring Program

Mobile Bay National Estuary Program (NEP) and the Alabama Department of Environmental Management (ADEM) have entered into a three-year agreement to start a new water quality monitoring program. Initial efforts will include work in the Bon Secour, Bayou La Batre, and Dog River sub-estuaries. Sub-estuaries are located where local rivers meet Mobile Bay. They are influenced by daily tides as well as fluctuations in salinity from the Gulf of Mexico. Local agencies, citizens, and researchers rely on quality information from these areas to make environmental decisions.

Area scientists and technicians within the Mobile Bay NEP water quality issue workgroup met several times with representatives of ADEM to develop a more intensive study effort in these areas that experience rapid growth as well as lack data. One sub-estuary a year will be sampled on a quarterly basis starting with the Bon Secour watershed. Long term plans include adding Fowl River and Fish River to the program. Monitoring will include a thorough investigation of water and sediment parameters. These include measurements on water chemistry, pathogens and metals. Samples will be taken from the rivers leading into the sub-estuary as well. Once analysis is complete, information will be made available through the Mobile Bay NEP's website, www.mobilebaynep.com.

-L. Yokel

Oyster Gardening 2005



Despite Hurricane Ivan, the Mobile Bay NEP and Auburn Marine Extension & Research Center distributed ~26,600 oysters to Denton Reef in November 2004. A new season is just around the corner. Volunteers are currently needed to help re-build oyster cages lost last year in the storm and build new cages for future volunteers. If you would like to get involved, contact Kara Lankford at 251-431-6409 or email at klankford@mobilebaynep.com.

Eight-Mile Creek and Gum Tree Branch Project

The Mobile Bay NEP in partnership with the Alabama Department of Environmental Management, the South Alabama Regional Planning Commission, and Mobile Engineering have kicked-off a study that will help locate sources of bacterial contamination in Eight-Mile Creek and Gum Tree Branch in the City of Prichard. This study will consist of intensive monitoring, GIS analysis, and collection and compilation of information on potential contamination sources such as permitted discharges, storm sewer outfalls, septic tanks, and others. The results of the two-year project will help evaluate effectiveness of the recently approved TMDLs* for these stream segments and may eventually identify specific inputs for remediation and/or correction by appropriate agencies. This project is funded in part by the EPA Gulf of Mexico Program and was developed in response to input gathered during stakeholder meetings in 2003. For further information contact David Yeager at 251-431-6409 or email at dwyeger@mobilebaynep.com. -D. Yeager

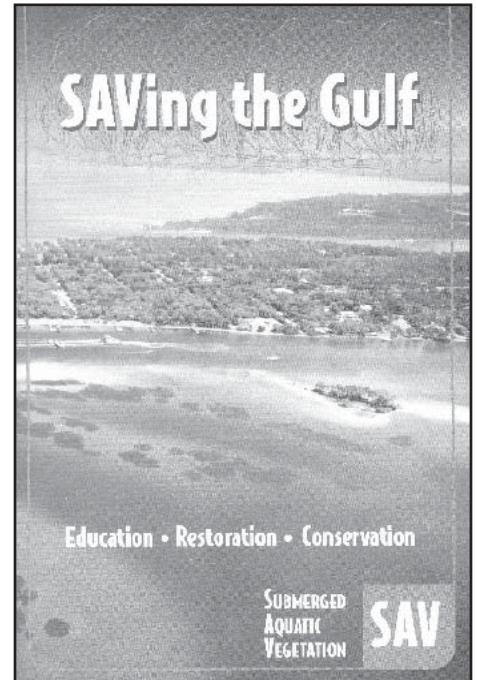
*TMDL = Total Maximum Daily Load describes the amount of a pollutant that a waterway can receive without violating water quality standards.

SAV Manual Completed

Submerged Aquatic Vegetation or “SAV” is an important resource on the bottom of the Mobile estuary. SAVs serve as wave buffers, provide food for waterfowl and filter polluted run-off. The Mobile Bay National Estuary Program (NEP) was awarded a grant from the Gulf of Mexico Program in 2003 to develop a volunteer program to grow SAVs. As a result of this grant and through the efforts of Dr. Just Cebrian at the Dauphin Island Sea Lab, a new manual is available that brings “Education-Restoration-Conservation” to south Alabama.

Having worked closely with Dr. Cebrian and the information gathered in this manual, Ms. Lisa Allen with Gulf Shores High School is already growing SAVs with her students. These plants will be used in local restoration projects.

Other contributors to the manual included Joan Turner, Andrea Anton, and Mairi Miller. Roberta Swann coordinated the effort from the NEP office. For more information on this program or if you would like to help with future plantings please contact Dr. Cebrian at 251-861-7568.



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